# User's Manual

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Thank you for purchasing this Digital Video Camera. Please make sure to read this manual thoroughly before using it and keep this manual in a safe place for future reference.

## Disclaimer

This company will endeavor to make sure the contents of this manual are correct and up to date. However, we do not guarantee the accuracy of the contents of this manual. In case there is any discrepancy between this manual and the Digital Video Camera, please use this camera as the basis. We reserve the right to change any content or technical rule without prior notification. In addition, the manufacturer reserves the right to change technical specifications and package contents without prior notification.

# Precautions

## General precautions

- Do not try to disassemble the product by yourself, which may damage the product or cause electric shock.
- Keep the Digital Video Camera away from the reach of children or animals to prevent them from swallowing the batteries or small accessories.
- Stop using the Digital Video Camera if any kind of liquid or foreign object enters the Digital Video Camera. If it happens, power off the Digital Video Camera and contact your dealer for help.
- Do not operate the Digital Video Camera with wet hands; it may cause electric shock.
- The Digital Video Camera may be damaged in an environment of high temperature. This camera is designed for use in the temperature between 0℃ and 40℃ (32℉ and 104℉).
- Do not use or store the product in dusty, dirty, sandy or the area that is close to air conditioner or heater.
- It is normal that the temperature of the Digital Video Camera body rises if the Digital Video Camera works for a long period of time.
- Do not open the battery cover while an image is being recorded. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in file.
- Before using this Digital Video Camera for important occasions (such as wedding or overseas trip), be sure to test this Digital Video Camera in order to ensure proper operations of this product.

## Power Supply

- Be sure to use the type of battery or battery charger attached to this Digital Video Camera. Using any other type of battery or battery charger might damage the equipment and render the guarantee void.
- Make sure the batteries are placed in the correct position. Error in the orientation of batteries might damage this product and result in fire.
- Please remove the batteries to avoid leaking of battery fluid if the camera is not to be used for a long period of time.

Please remove the crashed or damaged battery immediately to avoid leaking of battery fluid or abnormal expansion.

# Disposal of Waste Electrical and Electronic Equipment by users in private households in the European Union.

This symbol on the product or on the packaging indicates that this can not be disposed of as household waste. You must dispose of your waste equipment by handing it over to the applicable take-back scheme for the recycling of electrical and electronic equipment. For more information about recycling of this equipment, please contact your city office, the shop where you purchased the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

# FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

•

# 1 Overall Introduction

Please read this chapter carefully to understand the features and functions of this Digital Video Camera. The description of this chapter also includes the description of system requirement, package contents, and hardware components.

## 1.1 System Requirements

This Digital Video Camera requires a unit of computer with the following specifications:

- Windows® Vista / XP / 2000 operating system or Mac OS 10.3 ~10.4
- A CPU of at least the equivalent of Intel® Pentium 4 2.8GHz
- At least 2GB of RAM
- Standard USB 1.1 connection port or higher
- At least 64MB of display card

> - **Note:** USB 1.1 allows you to transmit files to the host, but using USB 2.0 connection port could increase the transmission speed far faster.

## 1.2 Features

This Digital Video Camera provides many features and functions including:

- High resolution pixel camera (maximum 16 million pixels)
- Touch screen
- Dual card slot (1 SD and 1 Micro SD)
- Slow motion Playback

In addition, this video camera has a USB mass storage hard disk, and SD card reader.

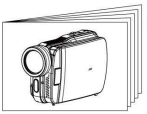
## 1.3 Accessories

This package should contain the following items. In case there is any missing or damaged item, please contact your dealer immediately.

❶ Digital video camera

❷ Pouch

❸ Quick guide



❹ Software CD

❺ HDMI cable

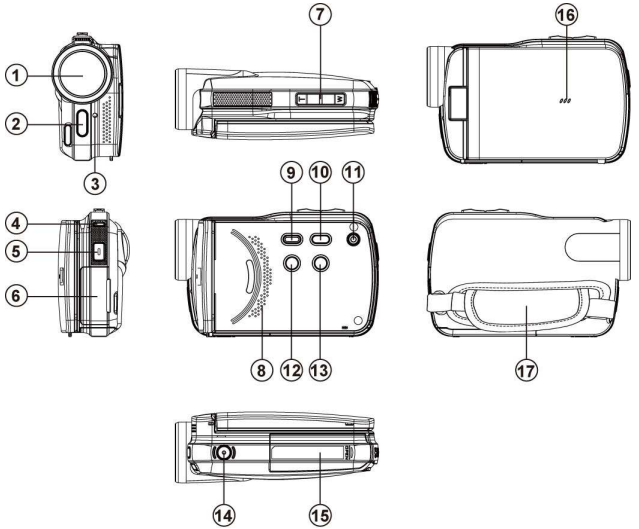
❻ Video cable

❼ USB cable

❽ Adaptor

❾ Lithium battery

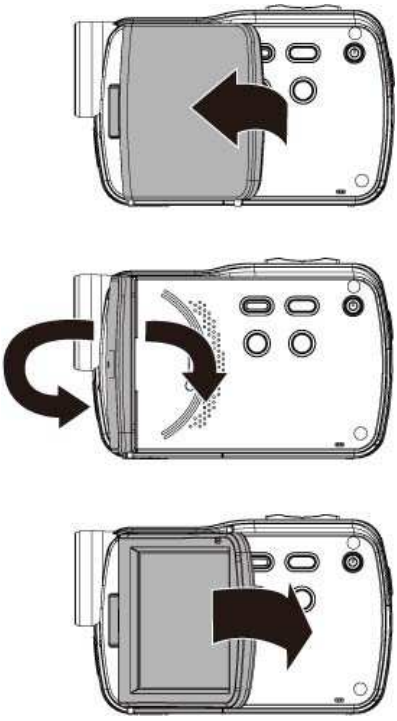
## 1.4 External View




| | | | |
|---|---|---|---|
| 1 | Lens | 10 | Menu Button |
| 2 | LED Light | 11 | Power |
| 3 | Self-timer Indicator | 12 | Light Button |
| 4 | Status Display | 13 | Mode Button |
| 5 | Recording Button | 14 | Tripod socket |
| 6 | USB/HD/TV/Audio Output | 15 | Battery / Memory Card Compartment |
| 7 | Zoom Button | 16 | Microphone |
| 8 | Speaker | 17 | Hand Strap |
| 9 | Playback Button | | |

## 1.5 Adjusting LCD Display

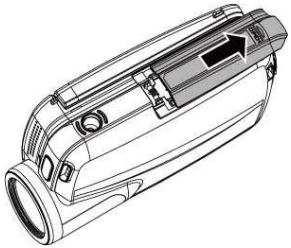
Before taking picture or recording movie clips, please rotate according to the illustrations below.



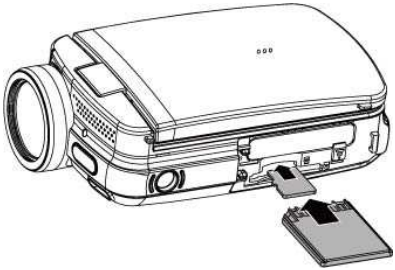
# 2 Getting Started

## 2.1 Inserting SD Card(s)

1. Open the battery cover.



2. Insert an SD card with the label facing downwards..



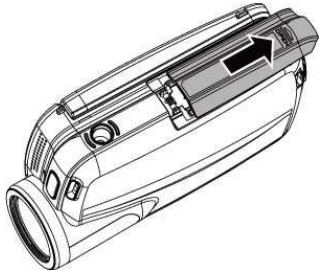
**Note:**
Do not remove or insert SD cards when the power of the Digital Video Camera is on to avoid damaging files.

## 2.2 Loading the Battery

Please use only the battery provided or recommended by the manufacturer or dealer.

- **Note:** Insert the battery correctly according to this description. Error in inserting the battery could result in damage to this Digital Video Camera and result in fire.

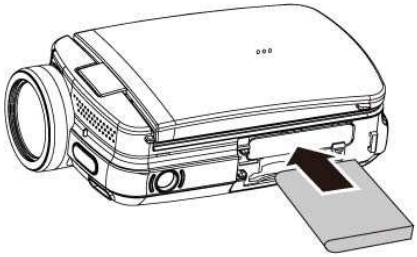
1. Open the battery cover.



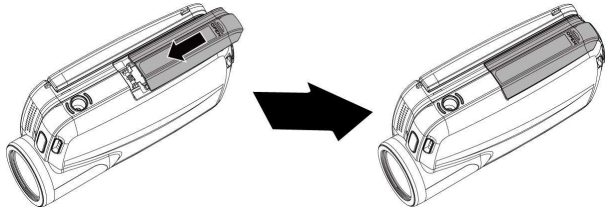
**Battery Status Indicator:**

| | |
|---|---|
| | Battery full |
| | Battery half full |
| | Battery empty |
| | • Charging battery (A new battery should be charged at least 4 hours.)<br>• The device power is supplied by DC input. (No battery inside.) |

2. Insert the battery according to the illustration.



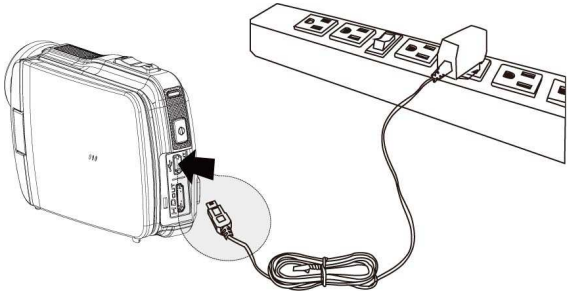
3. Close the battery cover.



## 2.3 Charging the Battery

You can use the adaptor attached to charge the lithium battery.

Insert the lithium battery into the Digital Video Camera and connect the camera to the cable of the adaptor.

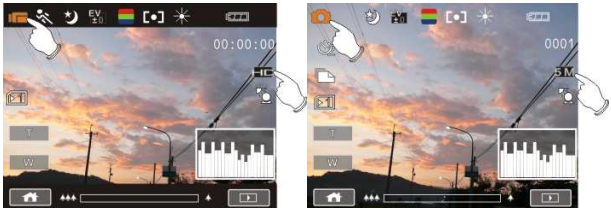


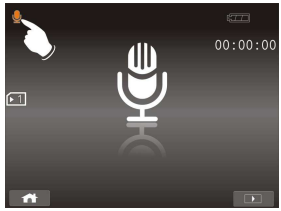
## 2.4 The gestures of using the touch screen

### 2.4.1 Single touch

The single touch function acts as a hotkey menu to adjust basic settings directly on the display.

1. Mode change (DV, DSC and Voice Recording)
2. Resolution change (Full HD, HD, WVGA, WEB or 16M, 8M, 5M, 3M)



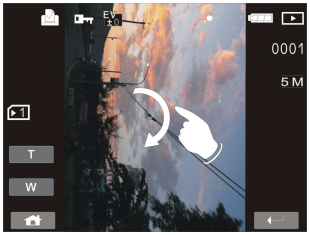



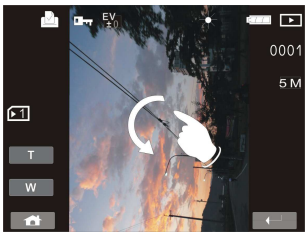
### 2.4.2 Slide

Slide right or left to view the previous file or the next file in Playback Mode.

### 2.4.3 Rotate

Under Playback Mode, you can rotate the image by 90°step as shown below.



## 2.5 Buttons & Functions

| Description | Button | Function |
|---|---|---|
| Power Button | | Press the button to turn ON/OFF the power. |
| Menu Button | | Press the button to display the main OSD menu. |
| LIGHT Button & MODE Button | | -Press [MODE] to access different models of DV, DSC and Voice recording.<br>- Press [LIGHT] to turn ON/OFF the LED Assist Light<br>-[MENU] and [PLAY BACK],2 buttons can be used for selection of the relevant functions. [LIGHT] is for left and [MODE] is for right. |
| Zoom Button | | -This Digital Video Camera is equipped with 4X digital zoom function. Please note that the 4X digital zoom is supported in 720P or lower video resolutions.<br>-[MENU] and [PLAY BACK] 2 buttons can be used for selection of the relevant functions. [T] is for up and [W] is for down. |

| | | |
|---|---|---|
| Recording button | | Press the start/stop button to take the image, or to start/stop movie clip and voice recording. |
| Playback Button | | Press the Playback button to enter Playback mode and playback the last file. |

## 2.6 About LED Indicators

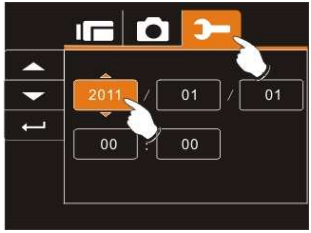
Below table describes the meaning of the camera LED indicators:

| | Indicator Color | Definition |
|---|---|---|
| **Power** | Green | Turning power on. |
| **Recording** | Red blinking | Recording |
| **Self-timer** | Red blinking | Start of Self-timer. |

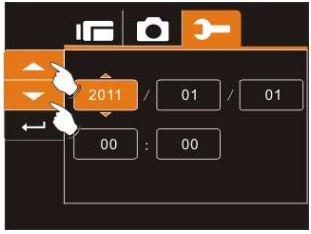
## 2.7 Initial settings before use

### 2.7.1 Setting Date and Time

1. Turn on the Digital Video Camera to set up the date and time for the first time. Set the date and time by moving up/down button or touching the screen to select.




2. Press left/right to highlight each column. Press Up/Down or touch the screen to select the column to adjust the value. Press Menu Button to store the value you change or touch the screen to adjust the Year, Date and Time before pressing the Return Button ( ) to store the value and leave the setting.

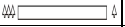


# 3 LCD Display Information

## 3.1 In Movie Clip Mode

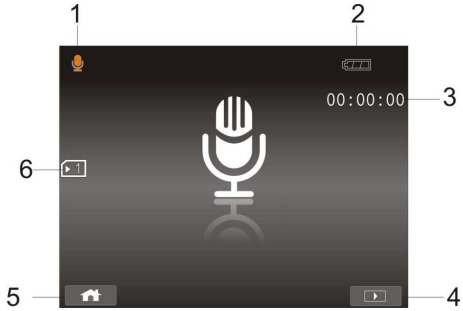
The following illustration shows the LCD display layout and icon description in the DV Mode ( ).

| | | |
|---|---|---|
| 1 | | Movie Clip recording indicator |
| 2 | | Motion Detection |
| 3 | | Night Mode indicator |
| 4 | | Exposure compensation indicator |
| 5 | | Color effect indicator |
| 6 | | Metering Mode |

| | | |
|---|---|---|
| 7 | | White balance indicator |
| 8 | | Battery status indicator |
| 9 | 00:00:00 | Remaining recording time indicator |
| 10 | | Resolution indicator |
| 11 | | Backlight indicator |
| 12 | | Histogram indicator |
| 13 | | Playback indicator |
| 14 |  | Digital Zoom indicator |
| 15 | | Menu Button |
| 16 | | Memory Status indicator<br> : SD card 1 indicator;<br> : SD card 2 indicator<br> : Internal memory indicator (displayed when there is no SD card) |

## 3.2 In Voice Recording Mode

The following illustration shows the LCD display layout and icon description in the Voice Recording Mode ( ).




| | | |
|---|---|---|
| 1 | | Voice Recording Mode indicator |
| 2 | | Battery status indicator |
| 3 | 00:00:00 | Recording time left indicator |
| 4 | | Playback Button |
| 5 | | Menu Button |
| 6 | | Memory Status indicator<br>▶1 : SD card 1 indicator;<br>▶2 : SD card 2 indicator<br>INT : Internal memory indicator (displayed when there is no SD card) |

## 3.3 In DSC Mode

The following illustration shows the LCD display layout and icon description in the DSC Mode ( ).

| | | |
|---|---|---|
| 1 | | DSC Mode indicator |
| 2 | | Night Mode indicator |
| 3 | | EV compensation indicator |
| 4 | | Effect indicator |
| 5 | | Metering Mode |
| 6 | | White balance indicator |
| 7 | | Battery indicator |

| | | |
|---|---|---|
| 8 | 0003 | Number of pictures left. |
| 9 | 5M | Resolution indicator |
| 10 | | Backlight indicator |
| 11 | | Histogram indicator |
| 12 | | Playback Button |
| 13 | | Digital zoom indicator |
| 14 | | Menu Button |
| 15 | INT | Memory Status indicator<br>1 : SD card 1 indicator;<br>2 : SD card 2 indicator<br>INT : Internal memory indicator (displayed when there is no SD card) |
| 16 | | Burst |
| 17 | | Self-timer indicator |

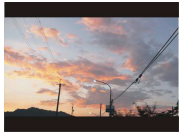
# 4 Using the Camera

## 4.1 Shooting a Movie Clip

1. DV mode is the default setting after you power on the Digital Video Camera.
2. Press the Recording button to start or stop moving recording.
3. The Digital Video Camera will store the Movie clip automatically.

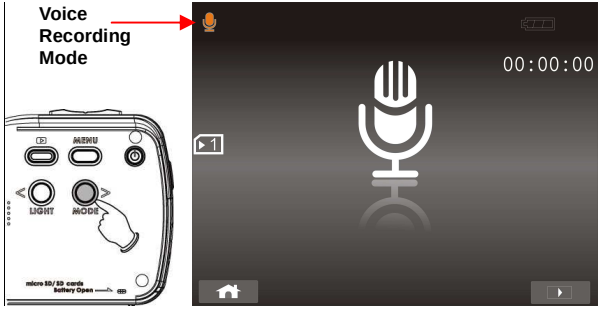
**DV Mode Indicator**

4. LCD screen ratio will be different depending on the setting of Movie Clip resolution. Please refer to the table shown below:

| Video Resolution | Preview |
|---|---|
| FHD ( 1920 x 1080 )<br>HD (1280 x 720)<br>WVGA (848 x 480) | 16:9 ratio<br>  |
| WEB (320 x 240) | 4:3 ratio<br> |

## 4.2 Voice Recording:

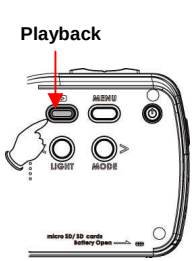
1. Turn on the Digital Video Camera.
2. Press the MODE button to enter Voice Recording mode or touch the screen hotkey.
3. Press the Recording button to start or stop Voice recording.



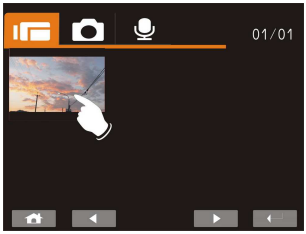
## 4.3 Movie Clip / Voice Clip Playback

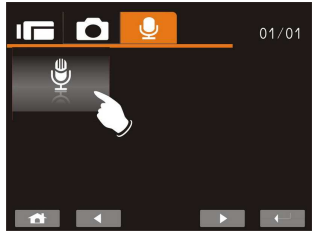
**Files may not be played back.**
1. The folder/file name has been changed on your computer.
2. When an image file has been processed by a computer or when the image file was recorded using a model other than that of your digital video camera, playback on the device is not guaranteed..

1. In Movie/Voice Recording Mode, press Playback Button to display recently stored file on the LCD screen.



2. Press up/down, left/right to view the stored file. Press the Recording Button to playback or touch the screen to select Playback of the file.

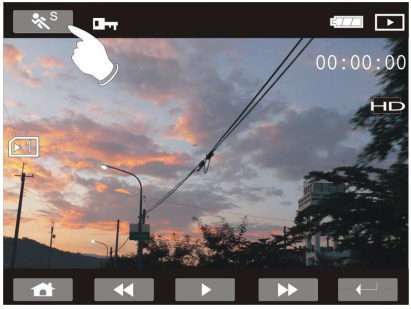



3. To pause the Playback of file, press the Recording Button or touch the screen icon ( / ).

4. Press the Playback Button to return to Movie/Voice Recording Mode.

5. You can also playback the movie clip at a different speed by touching the screen icon ( ) ON/OFF.




| Playback speed is as below when the Slow Motion is **"OFF"** : | | |
|---|---|---|
| ◀◀ | | ▶▶ |
| Rewind | **2X** play | Forward |
| Rewind | **4X** play | Forward |
| Rewind | **8X** play | Forward |
| Rewind | **16X** play | Forward |

| Playback speed is as below when the Slow Motion is **"ON":** | | |
|---|---|---|
| ◀◀ | | ▶▶ |
| Rewind | **1/2X** play | Forward |
| Rewind | **1/4X** play | Forward |
| Rewind | **1/8X** play | Forward |
| Rewind | **1/16X** play | Forward |

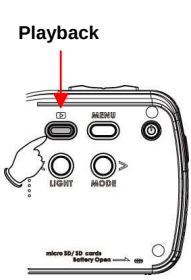
## 4.4 Shooting / Playback images

### 4.4.1 Taking a picture

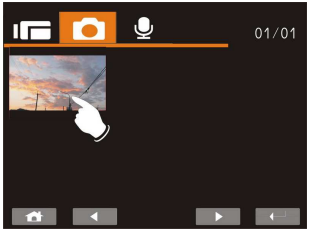
1. Turn on the power and set the digital video camera to the DSC mode,
2. Press the Recording Button to capture images.

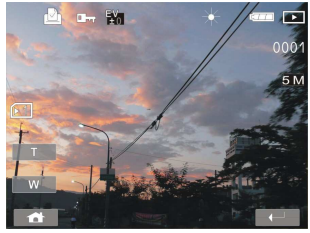
### 4.4.2 Images Playback

1. In DSC Mode, press Playback Button to display the images on the LCD screen.

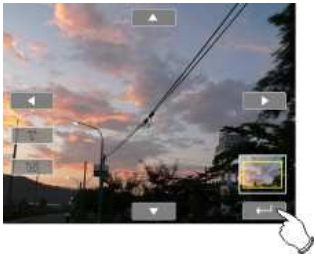


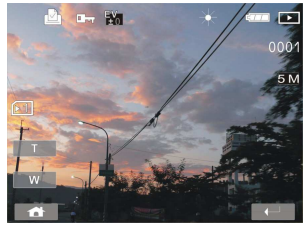
2. Press up/down, or left/right to view the stored files. Press the Recording Button to replay or touch the screen to playback.



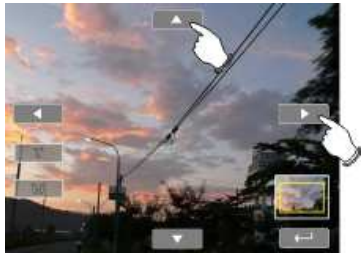



3. Touch the return button ( ) to return to full screen for viewing images.






4. Touch the screen icon ( T or W ) or press Recording Button to enlarge or shrink the image. Then, you can move the image up/down or left/right.

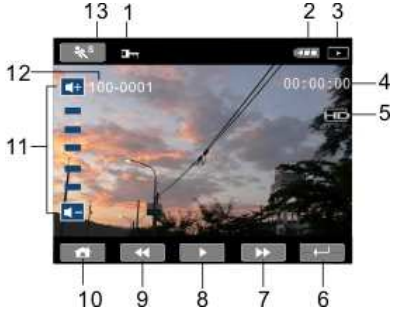


5. Press Playback Button again to return to DSC Mode.

# 5 LCD Display Information

## 5.1 Movie Clip Recording Mode:

Please refer to the following table regarding the description of each icon and symbol.




| | | |
|---|---|---|
| 1 | | File Protect indicator |
| 2 | | Battery status indicator |
| 3 | | Playback Mode icon |
| 4 | 00:00:00 | Length of each Movie Clip |
| 5 | HD | Resolution indicator |
| 6 | | Return Button |
| 7 | | Fast forward Playback Button |
| 8 | | Playback/Pause button |

| | | |
|---|---|---|
| 9 | | Fast rewind Playback Button |
| 10 | | Menu Button |
| 11 | | Sound volume touch icons |
| 12 | **100-0001** | Folder and file number |
| 13 | | Slow motion Playback |

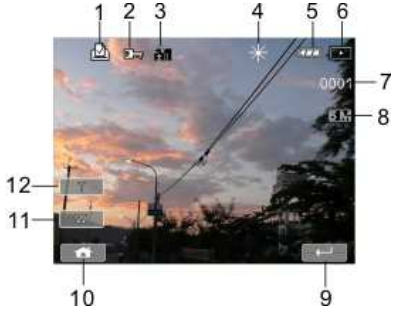
## 5.2 Voice Recording Mode:

Please refer to the following table regarding the description of each icon and symbol.

| | | |
|---|---|---|
| 1 | | File Protect indicator |
| 2 | | Battery status indicator |
| 3 | | Playback Mode icon |
| 4 | 00:00:00 | Length of each voice recording. |
| 5 | | Playback mode indicator |
| 6 | | Fast forward Playback Button |
| 7 | | Playback/Pause Button |
| 8 | | Fast rewind Playback Button |
| 9 | | Menu Button |
| 10 | | Sound volume touch icons |

## 5.3 DSC Playback Mode

Please refer to the following illustration to familiarize yourself with icons and symbols of DSC Playback Mode.




| | | |
|---|---|---|
| 1 | | DPOF（Digital Print Order Format）indicator |
| 2 | | File Protect indicator |
| 3 | EV ±0 | Exposure compensation indicator |
| 4 | | White balance |
| 5 | | Battery status indicator |
| 6 | | Image Playback Mode icon |
| 7 | 0003 | Number of pictures left |

| | | |
|---|---|---|
| 8 | | Resolution indicator |
| 9 | | Return Button |
| 10 | | Menu Button |
| 11 | | Zoom- Out indicator |
| 12 | | Zoom- In indicator |

# 6 Menu Mode

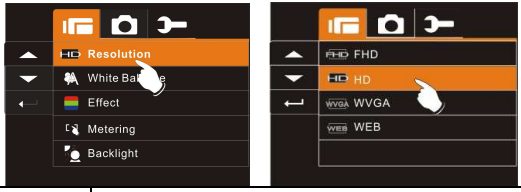
When a menu screen is displayed, the Menu button is used to move through the highlighted items in the submenu or to select a menu item.

## 6.1 Menu options of Movie Clip Mode

Set your digital video camera to Movie Clip Mode and press the MENU Button to show the Movie options menu.

### 6.1.1 Movie Clip Resolution

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and press Up/Down Button to highlight the Resolution item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select FHD, HD, WVGA or WEB. Press the Recording Button to confirm; or touch the screen to select the item.

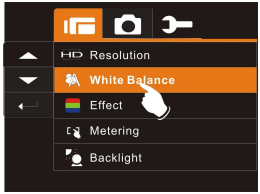


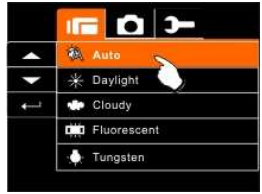

| | |
|---|---|
| FHD | 1920 x 1080 |
| HD | 1280 x 720 |
| WVGA | 848 x 480 |
| WEB | 320 x 240 |

- Note: 1. When setting to FHD, HD or WVGA resolution, the LCD display aspect ratio is 16:9.
  2. When setting to WEB video resolution, the LCD display aspect ratio is 4:3.

## 6.1.2 White Balance

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and move the Up/Down Button to highlight the White Balance item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select Auto, Daylight, Cloudy, Fluorescent or Tungsten. Press the Recording Button to confirm; or touch the screen to select the item.

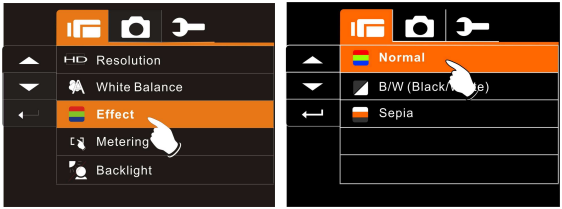



| | |
|---|---|
| Auto | The Digital Video Camera automatically adjusts white balance. |
| Daylight | The setting is suitable for outdoor recording in daylight. |
| Cloudy | The setting is suitable for recording in cloudy or shady environments. |
| Fluorescent | The setting is suitable for indoor with fluorescent lamp lighting, or environments with high color temperature. |
| Tungsten | The setting is suitable for indoor with incandescent lamp light, or environments with low color temperature. |

## 6.1.3 Effect

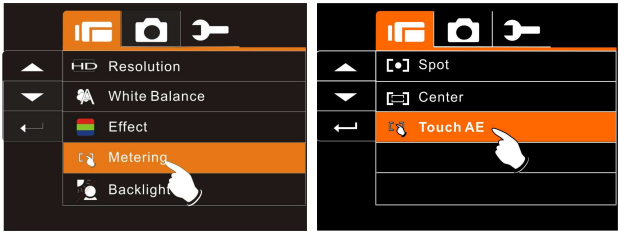
1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and press the Up/Down Button to highlight the Effect item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select Normal, B/W or Sepia. Press the Recording Button to confirm; or touch the screen to select the item.




| | |
|---|---|
| Normal | Make recordings in nature color |
| B&W | Make recordings in B&W (Black and White) color |
| Sepia | Make recordings in Sepia-toned color |

## 6.1.4 Metering

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Metering item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select Spot, Center or Touch AE. Press the Recording Button to confirm; or touch the screen to select the item.



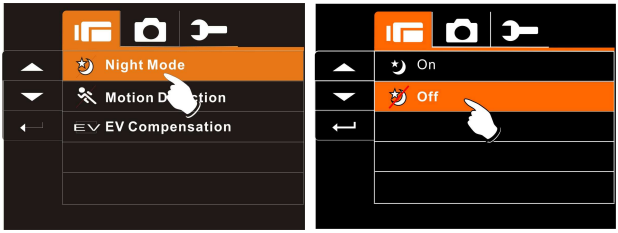

| | |
|---|---|
| Spot | This setting is to ensure correct exposure for the object even if the background is very bright or very dark. |
| Center | Use this setting to preserve background details while letting lighting conditions at the center of the frame define exposure. |
| Touch AE | Touch the object to make it with suitable light. |

### 6.1.5 Backlight

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Backlight item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select On or Off. Press the Recording Button to confirm; or touch the screen to select the item.

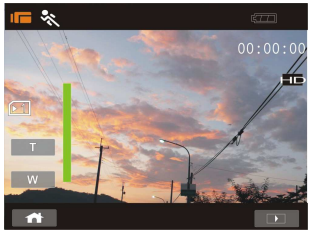
### 6.1.6 Night Mode

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and press the Up/Down Button to highlight the Night Mode item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select On or Off. Press the Recording Button to confirm; or touch the screen to select the item.

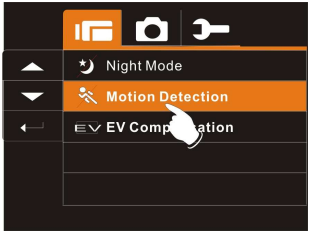


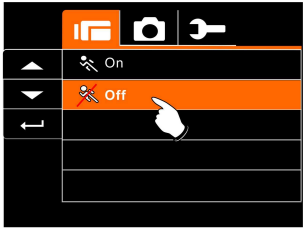
### 6.1.7 Motion Detection

When Motion Detection is turned on, the camera will detect the motion for Movie Clip recording without human intervention. When the AE variation is detected, the recording will start immediately.




1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Motion Detection item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select On or Off. Press the Recording Button to confirm; or touch the screen to select the item.

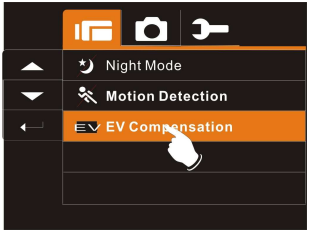


### 6.1.8 EV Compensation

You can adjust the value of the exposure compensation which is ranged from -2.0EV to +2.0EV (at 0.5EV increment). The higher the EV value, the brighter the image will be.

1. Turn on the Digital Video Camera and make sure it is in the DV Mode.
2. Press Menu Button and move the Up/Down Button to highlight the EV Compensation item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to adjust the Exposure value (-2.0 ~ + 2.0). Press the Recording Button to confirm; or touch the screen to select the item.

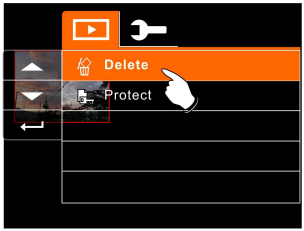


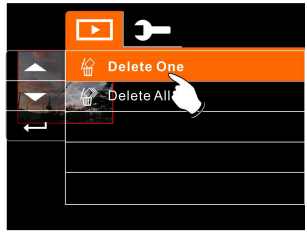
## 6.2 Menus of Movie Clip/Voice Playback

When in Movie Clip mode, press the Menu Button to show the Movie Clip options menu.

### 6.2.1 Delete

1. Turn on the Digital Video Camera and make sure it is in the Movie Clip/Voice Playback Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Delete item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select Delete One or Delete All. Press the Recording Button to confirm; or touch the screen to select the item.



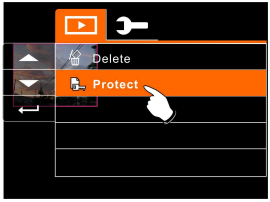
4. Touch the screen to select the item.

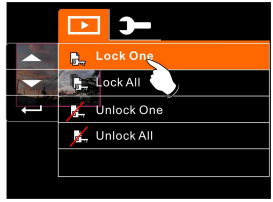
| | |
|---|---|
| Delete One | Delete the current file |
| Delete All | Delete all files stored in the Digital Video Camera |

- **Note:** The file cannot be recovered once it is deleted. Therefore, please make sure you have backed up the file before Delete. Protect files cannot be deleted. Before delete, you must unlock the file.

## 6.2.2 Protect

1. Turn on the Digital Video Camera and make sure it is in the Movie Clip/Voice Playback Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Protect item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select Lock One, Local All, Unlock One or Unlock All. Press the Recording Button to confirm; or touch the screen to select the item.




**Protect Lock**

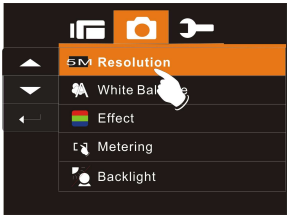
- **Note:** To unlock the file from Protect, repeat steps stated above. When the Protection is relieved from Protect mode, the locked icon will disappear.

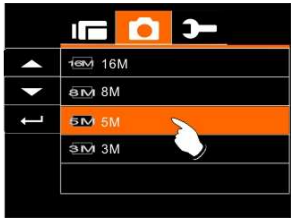
## 6.3 Menu options of Camera Mode

When in DSC Mode, press Menu Button to display camera mode option Menu.

### 6.3.1 Still Image Resolution

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Resolution item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select 16M, 8M, 5M or 3M. Press the Recording Button to confirm; or touch the screen to select the item.



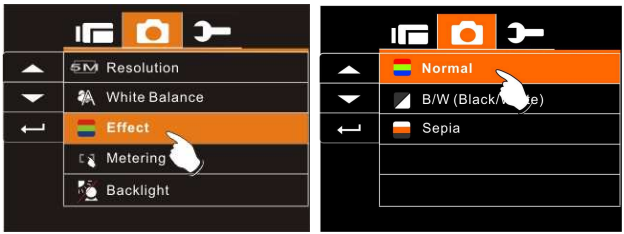

| | |
|---|---|
| 16M 16M | 4608 x 3456 pixels (Interpolation) |
| 8M 8M | 3200 x 2400 pixels (Interpolation) |
| 5M 5M | 2592 x 1944 pixels |
| 3M 3M | 2048 x 1536 pixels |

### 6.3.2 White Balance

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the White Balance item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select Auto, Daylight, Cloudy, Fluorescent or Tungsten. Press the Recording Button to confirm; or touch the screen to select the item.

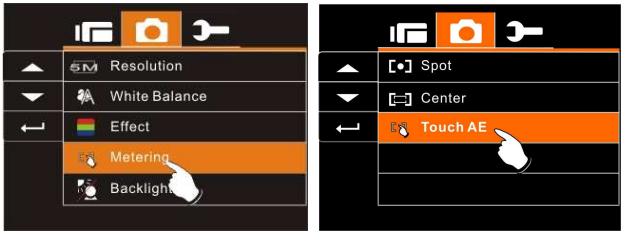
### 6.3.3 Effect

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Effect item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select Normal, B/W or Sepia. Press the Recording Button to confirm; or touch the screen to select the item.



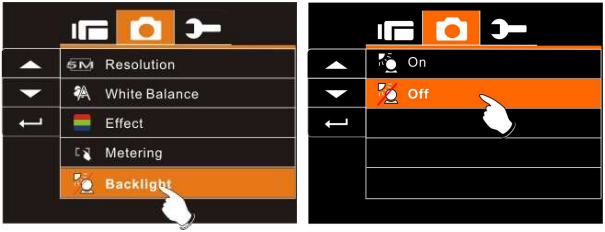
### 6.3.4 Metering

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Metering item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select Spot, Center or Touch AE. Press the Recording Button to confirm; or touch the screen to select the item.



### 6.3.5 Backlight

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Backlight item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select ON or OFF. Press the Recording Button to confirm; or touch the screen to select the item.

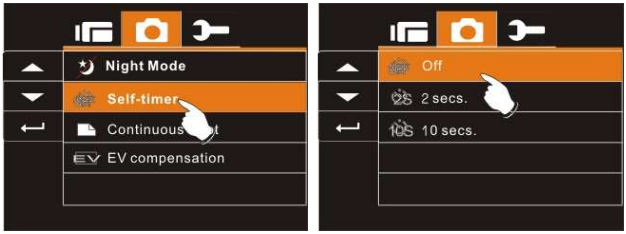


### 6.3.6 Night Mode

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Night Mode item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select On or Off. Press the Recording Button to confirm; or touch the screen to select the item.

### 6.3.7 Self-timer

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and use the Up/Down Button to highlight the Self-timer item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select OFF, 2 secs. or 10 secs. Press the Recording Button to confirm; or touch the screen to select the item.




**With 2 secs. Self-timer**:

The image will be taken 2 seconds after the shutter is released.

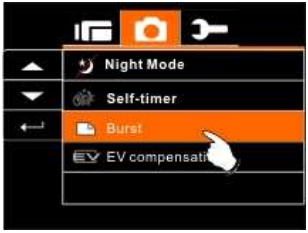
**With 10 secs. Self-timer**:

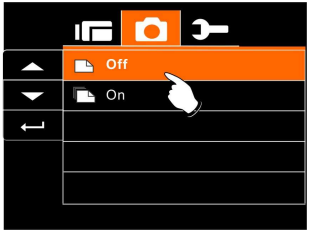
The image will be taken 10 seconds after the shutter is released.

### 6.3.8 Burst

You can continuously shooting three pictures by this function, started by pressing and holding the Recording Button and ending automatically by taken three pictures.

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and press the Up/Down Button to highlight the Burst item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select OFF or ON. Press the Recording Button to confirm; or touch the screen to select the item.

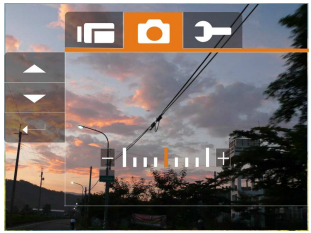


### 6.3.9 EV compensation

You can adjust the value of the exposure compensation which is ranged from -2.0EV to +2.0EV (at 0.5EV increment). The higher the EV value, the brighter the image will be.

1. Turn on the Digital Video Camera and make sure it is in the DSC Mode.
2. Press Menu Button and press the Up/Down Button to highlight the EV Compression item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to adjust the exposure value (-2.0 ~ +2.0). Press the Recording Button to confirm; or touch the screen to select the item.

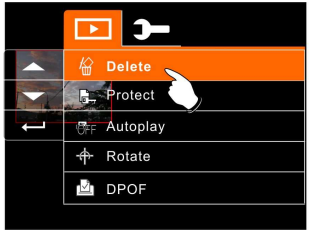


## 6.4 Menus of Playback

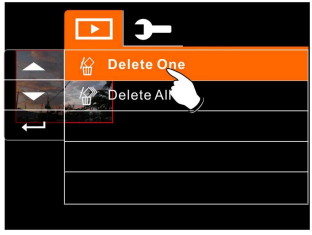
### 6.4.1 Delete

Use this function to delete the files.

1. Turn on the Digital Video Camera and make sure it is in the Playback Mode.
2. Press Menu Button and press the Up/Down Button; or touch the screen to select the file to be deleted or to delete all files.




3. Press the Up/Down Button or touch the screen to select “Delete one” or “Delete All” to display submenu.

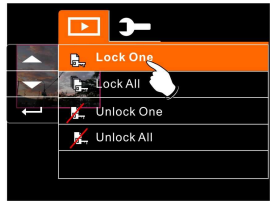


4. Touch the screen to select the item.

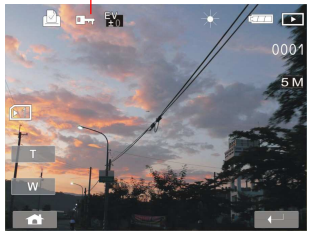
- **Note:** The files cannot be recovered once deleted. Therefore, please make sure you have a backup file before delete. The protect files will not be able to delete. Before delete of Protected file, you must unlock the file.

## 6.4.2 Protect

1. Turn on the power of Digital Video Camera and make sure it is in the Playback Mode.
2. Choose the file which you want to protect.
3. Press Menu Button and move the Up/Down Button to highlight the Protect item. Press the Recording Button to display submenu; or touch the screen to select the item.
4. Press Up/Down Button or touch the screen to select item. Press the Recording Button or touch the screen to confirm. The Locked icon will be displayed to indicate the file is Protected.



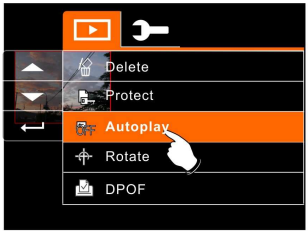

**Protect Lock**




- **Note:** Repeat above steps to unlock the file. When the file is unlocked, the locked icon will disappear.

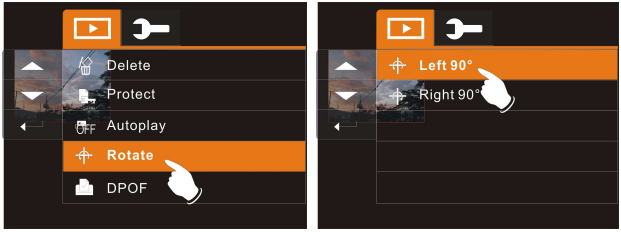
### 6.4.3 Autoplay

1. Turn on the power of Digital Video Camera and make sure it is in the Playback Mode.
2. Press Menu Button and move the Up/Down Button to highlight the Auto play item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button or touch the screen to select “Off”, 1sec., or “3 sec” , The images will be displayed automatically.



## 6.4.4 Rotate

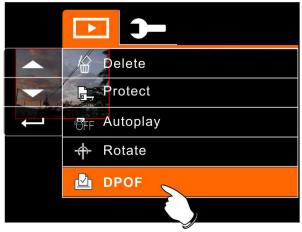
1. Turn on the power of the Digital Video Camera and make sure it is in the Playback Mode.
2. Use Up/Down Button to highlight Rotate item and press the Recording Button; or touch the screen to select the Left 90° or Right 90°.



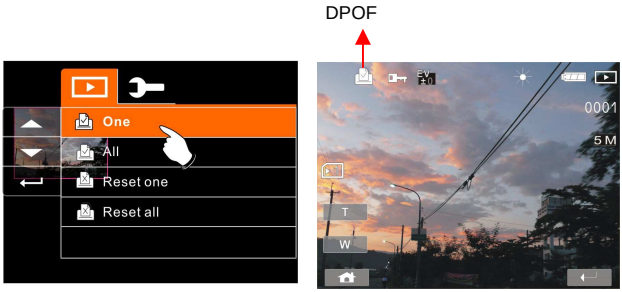
### 6.4.5 DPOF

Use DPOF (Digital Print Order Format) function to indicate the printing information stored in the memory card.

1. Turn on the power of the Digital Video Camera and make sure it is in the Playback Mode. Press Playback Button and press Menu Button to display Image Playback Menu; or touch the screen to select the item.
2. Use Up/Down Button to highlight the DPOF item. Press the Recording Button; or touch the screen to display submenu.




3. Use the Up/Down Button and press the Recording Button; or touch the screen to select the item. The DPOF icon will be shown to indicate the files that are ordered for printing.




4. Press the Playback Button or touch the screen to exit the image.

- **Note:**1. A memory card is required for the DPOF function.
  2. If DPOF is set, the pictures to be printed are ordered to print.

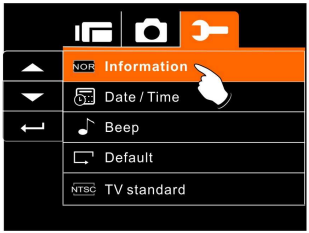
## 6.5 Setting Menu

Setting Menu can be used to select all kinds of the Digital Video Camera settings.

### 6.5.1 Information

This function can be used to display information on the LCD screen to help you capture the best movie and image clips.

1. Turn On the Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Information item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select Normal, Histogram, or OFF. Press the Recording Button to confirm; or touch the screen to select the item.

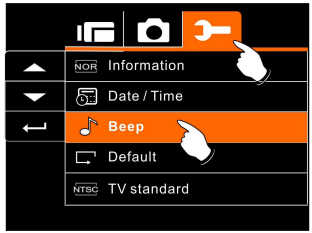


### 6.5.2 Date / Time

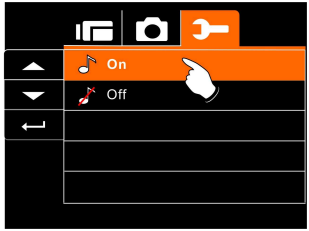
Please refer to 2.7.1 the Setting of Date and time.

### 6.5.3 Beep

1. Turn on the power of Digital Video Camera and switch to SET Mode. Press the Up/Down Button up or down to highlight the Beep and press the Recording selection Button to confirm or touch the screen to select.



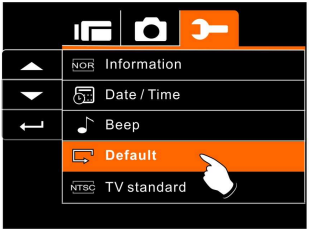

2. Use Up/Down Button or touch the screen to select On or Off.

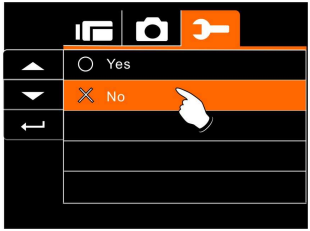


### 6.5.4 Default

Use this function to reset all settings to default settings.

1. Turn on the power of Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Default item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button or touch the screen to select “O” YES or “X” NO. Press the Recording Button to confirm; or touch the screen to select the item.

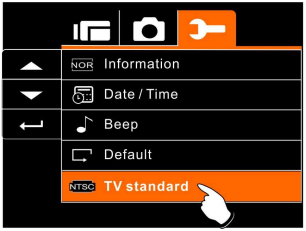


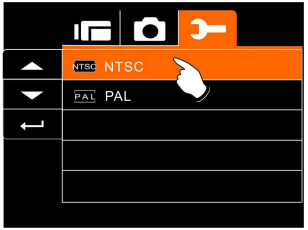



### 6.5.5 TV standard

Use the TV standard to set the TV system for your area.

1. Turn on the power of Digital Video Camera and switch to SET Mode.
2. Use Up/Down Button to highlight the TV standard item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select NTSC or PAL. Press the Recording Button to confirm; or touch the screen to select the item.




| TV out standard setting reference | |
|---|---|
| NTSC NTSC | USA, Canada, Japan, Korea, Taiwan, Mexico |
| PAL PAL | Australia, Austria, Belgium, China, Denmark, Finland, Germany, UK, Italy, Kuwait, Malaysia, New Zealand, Singapore, Spain, Sweden, Switzerland, Thailand, Norway |

### 6.5.6 Auto Power Off

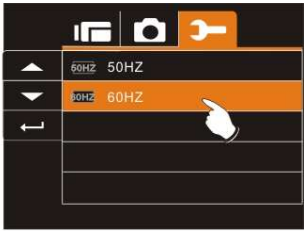
This function can be used to turn off the Digital Video Camera automatically after not using it for a period of time.

1. Turn on the Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Auto Power Off item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select OFF, 3 mins, or 5 mins; or touch the screen to select the item.

## 6.5.7 Frequency

Use the Frequency option to set the frequency system for your area.

1. Turn on the power of Digital Video Camera and switch to SET Mode.
2. Use Up/Down Button to highlight the Frequency selection item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select 50 HZ or 60 HZ. Press the Recording Button to confirm; or touch the screen to select the item.




| Frequency setting reference: | |
|---|---|
| 50HZ 50HZ | UK, Germany, Spain, Italy, France, Netherlands, Portugal, Russia, China, Japan |
| 60HZ 60HZ | USA, Taiwan, Korea, Japan |

## 6.5.8 Language

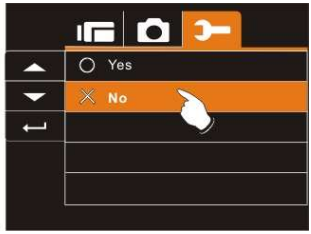
1. Turn on the power of the Digital Video Camera and switch to SET Mode. Move Up/Down Button to highlight the Language and press the Recording button to confirm or touch the screen to select.

2. Press Up/Down Button or touch the screen to select the following languages: English, German, French, Italian, Japanese, Spanish, Portuguese, Traditional Chinese, Simplified Chinese, Turkish, Russian, Thai, Arabian or Korean.

### 6.5.9 Format

This function allows you to format the memory card or the built-in memory.

1. Turn on the power of Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Format item. Press the Recording Button or touch the screen to display submenu.
3. Press Up/Down Button to select “O” Yes or “X” NO. Press the Recording Button to confirm; or touch the screen to select the item.




4. The format of the current storage media (memory card or internal memory) is now completed.

- **Note:** All the data stored in the memory card or flash memory will be deleted after formatting.

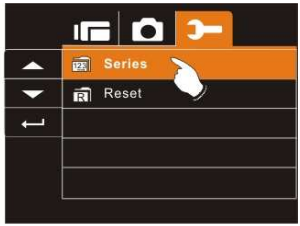
## 6.5.10 File Number(Default: Series)

This setting allows you to name the files.

If “Series” is selected, the file name will follow the latest stored file consecutively.

If “Reset” is selected, the next file name will start from 0001 even after formatting, deleting or inserting a new memory card.

1. Turn on the power of Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight File Number item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Use Up/Down Button to select Series or Reset. Press the Recording Button to confirm; or touch the screen to select the item.



### 6.5.11 LCD brightness

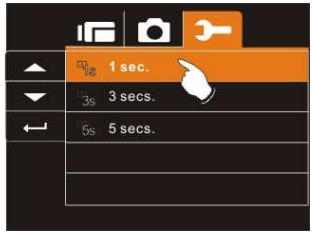
This function can be used to adjust the brightness of the screen.

1. Turn on the Digital Video Camera and switch to SET Mode.
2. Use Up/Down Button to highlight LCD brightness item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select High, Medium, or Low. Press the Recording Button to confirm; or touch the screen to select the item.

### 6.5.12 Instant Review

This function can be used to instantly browse the files after taking the picture.

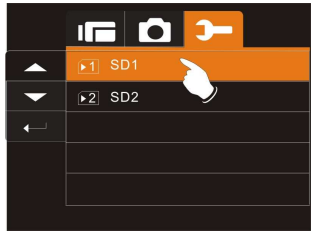
1. Turn on the Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Instant Review item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press Up/Down Button to select 1 sec., 3 secs, or 5 secs. Press the Recording Button to confirm; or touch the screen to select the item.



### 6.5.13 Memory

Use this function to select data storage location.

1. Turn on the Digital Video Camera and switch to SET Mode.
2. Press Up/Down Button to highlight Memory item. Press the Recording Button to display submenu; or Touch the screen to select the item.
3. Press Up/Down Button to select Internal, SD1, or SD2. Press the Recording Button to confirm; or touch the screen to select the item.

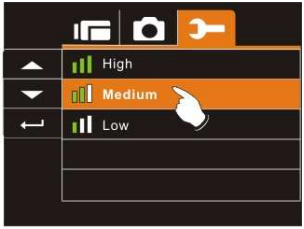



Note:
The images or movie clips can be stored in a built-in flash memory or external SD cards. When the SD cards are inserted, the files will be stored in the external SD cards rather than the internal flash memory. On the other hand, the files will be stored in the built-in flash memory when SD card(s) is not inserted.

### 6.5.14 Volume

Use this function to adjust the sound volume.

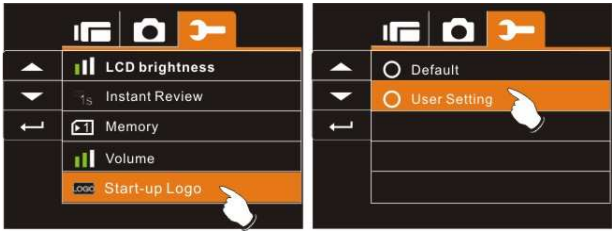
1. Turn on the Digital Video Camera and switch to SET Mode.
2. Press the Up/Down Button to highlight Volume item. Press the Recording Button to display submenu; or touch the screen to select the item.
3. Press the Up/Down Button to select High, Medium, or Low. Press the Recording Button to confirm; or touch the screen to select the item.




### 6.5.15 Start-up LOGO

Use this function to the image that is displayed on the LCD when the digital camcorder is turned on.

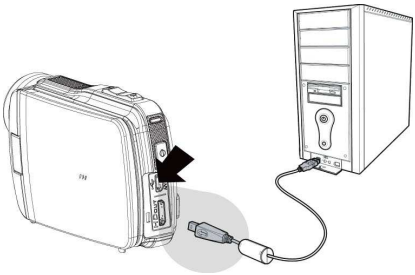
1. Turn on the Digital Camcorder and switch to Setup Menu.
2. Press the Up/Down Button to highlight the Star-up Logo item. Press the Recording Button or touch the icon on the screen to display the submenu.
3. Press the Up/Down Button to select Default or User Setting. Press the Recording Button or touch the screen to select the item.



# 7 PC and TV Connection

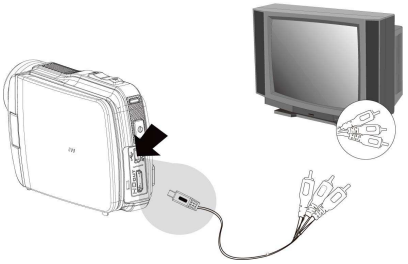
## 7.1 Connecting to the Computer

As shown in the illustration, use the USB cable provided to connect the Digital Video Camera to a PC for file transmission.



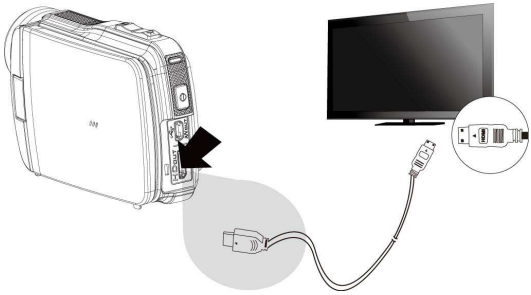
## 7.2 Connecting to a Standard TV

As shown in the illustration, use the video cable to connect the Digital Video Camera to a standard TV.



## 7.3 Connecting to a HD TV

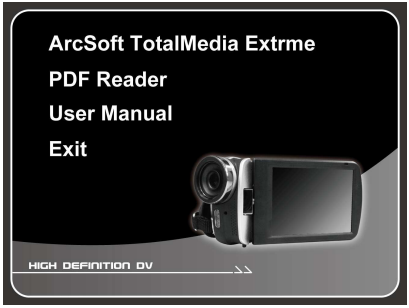
As shown in the illustration, use the HDMI cable provided to connect the Digital Video Camera to a HD TV for high resolution picture display.



# 8 Installing the Software

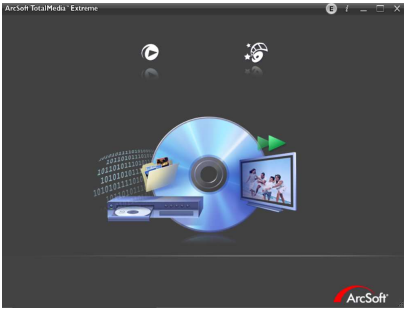
1. Place the CD ROM attached into the CD player.
2. If the CD is not executed automatically, please use Windows File Manager to execute the **Install_CD.exe** file in the CD.

   The following screen will be displayed.




3. Press the Menu item and follow the Installation process and follow the instructions on screen.

# 9 Editing Software




ArcSoft Total Media Extreme(TME) ™ manages your media for you, and gives you tons of fun and exciting ways to create and share projects featuring your photo, video, and music files. Edit, enhance and add creative effects to your photos. You can

- Create your own movies or photo slide shows complete with soundtrack.
- Upload your files easily to YouTube™!
- Or share them through simple email attachments or popular photo printing.
- You can go to http://www.arcsoft.com/ for more information.

# 10 Appendix

## Specifications

| | |
|---|---|
| Image sensor | 1/3.2 inch. 5.0 mega pixels CMOS sensor |
| Effective pixels | 5.03 Mega pixels (2592 x 1944) |
| Storage media | SD / Micro SD card<br>SDHC upto 32GB Supported. |
| ISO Equipment | Auto |
| Color effect | Normal/BW/Sepia |
| Lens | F/3.5~3.7, f=35~350mm |
| Focus range | Wide: 10 cm ~ infinity, Tele: 100 cm ~ infinity |
| Still image | Format: JPEG (DPOF, EXIF)<br>Resolution: 3MP, 5MP, 8MP(Interpolation), 16MP (interpolation) |
| Movie Clip | Format: H.264 (MOV)<br>Resolution: FHD (1920 x 1080 / 30 fps)<br>HD (1280 x 720 / 30 fps)<br>WVGA (848 x 480 / 60 fps)<br>WEB (320 x 240 / 30 fps.) |
| Zoom | Still Image mode: 5X Optical zoom;<br>4X Digital zoom(supported for 720P or lower resolutions)<br>Play mode: 8X (depends on image size) |
| Audio | Voice Recording: ADPCM |

| | |
|---|---|
| LCD Display | 3.0” Touch Panel screen |
| Assist LED light | Range: < 1.0M<br>Movie Clip: On/Off<br>DSC: On/Off |
| White balance | Auto / Daylight / Cloudy / Tungsten / Fluorescent |
| Exposure | -2.0 EV~+2.0 EV(0.5EV Steps) |
| Self-Timer | Off, 2 seconds, 10 seconds. |
| Interface | Digital output connector: USB 2.0 high speed<br>MIC Input<br>HDMI<br>USB DC IN |
| TV output | NTSC/PAL |
| Recording | Electronic Recording<br>1/2~1/4000 second |
| Auto Power Off | Off, 3 minutes, 5 minutes |
| Power Source | NP-60 Li-ion Battery (1050mAh) |
| Dimensions | 110(L) x 68(H) x 37(W) mm |
| Weight | About 186g （without battery） |

## Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Can not turn on the power of Digital Video Camera. | 1. Batteries are not inserted correctly.<br>2. Batteries are exhausted. | 1. Please insert batteries correctly.<br>2. Replace the batteries. |
| Camera shutdown suddenly. | 1. Power saving mode already activated.<br>2. Battery exhausted. | 1. Please turn on the power again.<br>2. Replace the batteries. |
| Pictures are not stored in the memory. | Power off before storing the images. | Please change to new batteries when the battery indicator turns to red color. |
| Camera shutdown when using Self-timer shooting picture. | Batteries in camera are exhausted. | Change new batteries. |
| Images are out of focus | Object exceeds the range of focus. | Please take the picture within the focusing range and select normal or Macro Mode. |

| | | |
|---|---|---|
| Unable to use the external memory card. | 1. Memory card is Protected.<br>2. Memory card contains non-DCF images taken by other cameras. | 1. Unlock the memory card.<br>2. Reformat the memory card. Please make sure to backup the file before reformatting memory card. |
| All Buttons can not work or camera hangs. | Short circuit occurred when connecting the camera to other device. | Take out batteries in the camera and re-insert again. |

# User's Manual